

## REMARKS

The above Amendments and these Remarks are in reply to the Office Action mailed July 29, 2004 (the "Office Action"). Claims 1, 2, 4, 8-10, 13 and 15-17 were pending in the Application prior to the outstanding Office Action. In the Office Action, claims 1, 2, 4, 8-10, 13 and 15-17 were rejected under 35 U.S.C. §103(a).

### **I. RESPONSE TO REJECTIONS UNDER 35 U.S.C. §103(a)**

On pages 3-5 of the Office Action, the Examiner rejected claims 1, 2, 4, 8-10, 13 and 15-17 under 35 U.S.C. §103(a) as being unpatentable over several combinations of the following references:

- U.S. Patent No. 6,138,721 issued to Bonora et al ("*Bonora*");
- U.S. Patent No. 6,281,516 issued to Bacchi et al. ("*Bacchi*");
- U.S. Patent No. 6,053,983 issued to Saeki et al. ("*Saeki*"); and
- Prior art shown in Fig. 3 of this application ("*Prior Art*").

*Bonora* discloses an alignment system "for providing quick and easy attachment and adjustment of the load port interface assembly to a BOLTS interface." *Bonora*, Abstract. The BOLTS interface plate 12 "includes a ball joint 14 mounted to a plate 16 on the BOLTS interface plate 12." *Bonora*, 4:63-65. The load port assembly includes a lateral adjustment plate 24 on the bottom surface. "[A] spherical detent is formed in the bottom portion of the lateral adjustment plate 24 to define a socket 28." *Bonora*, 5:8-10. The ball and socket configuration allows a single person to adjust the roll angle and the azimuth angle of the load port assembly 10 with respect to the BOLTS plate 12.

*Bacchi* discloses a wafer transport system 10. The base of the system 10 includes "a frame 12 to which two front or port plates 14 are attached." *Bacchi*, 4:16-17. "Each front plate 14 supports one of two substantially identical box load interface systems 16 for front-opening semiconductor carrier boxes 18." *Bacchi*, 4:17-19. Each port plate 14 includes an I/O port (aperture 74) to mate with a port door 76. *Bacchi*, 5:12-13; Fig. 2. Figs. 8-9 and 12 of *Bacchi* illustrate an elevator assembly 28 mounted to each port plate 14 below the box load interface system 16. Fig. 12 shows elevator assembly 12 "in a fully raised position (solid lines) 350 and a fully lowered position (outlined in phantom lines) 352." *Bacchi*, 10:43-45.

*Saeki* discloses “a wafer detector 45 for detecting the wafers W remaining in the carrier body 10.” *Saeki*, 5:33-35. The wafer detector 45 is integrated into the port door (lid holding member 41). The wafer detector 45 includes “a plurality of light emitting devices 47 and a plurality of photoelectric devices 48.” *Saeki*, 5:36-37.

The *Prior Art* shown in Fig. 3 of this application illustrates a “load port assemblies 28 for receiving a workpiece carrier, opening the carrier, and presenting the workpiece to the robot 24.” Application, p. 4, line 20 – p. 5, line 1. An example of the load port assembly 28 provided in the application is “United States Patent No. 6,138,721 ... [which] discloses a system for adjusting a load port assembly.” Application p. 5, lines 7-12. In other words, the load port assembly 28 illustrated in Fig. 3 of this Application is the invention disclosed in *Bonora*.

***Bonora in view of Bacchi, and further in view of the Prior Art***

On pages 3-4 of the Office Action, the Examiner rejected claims 1-2, 8-10, 13 and 16-17 under 35 U.S.C.103(a) as being unpatentable over *Bonora* in view of *Bacchi*, and further in view of the Admitted Prior Art.

**1. Independent claim 1 Is Patently Distinguishable Over *Bonora* in view of *Bacchi*, and further in view of the Prior Art**

Claim 1, in part, recites a frame having:

“a lower support member having a first mounting surface and second mounting surface, said lower support member forming a port door/carrier door storage compartment between said first and second mounting surfaces for isolating a pod door and carrier door from the interior area of the processing tool;”

The Examiner acknowledges that *Bonora* “do not [sic] teach a ... separate storage compartment for the port door/carrier door assembly when opened.” Office Action, p. 3. The Examiner further acknowledges that *Bacchi* “do not [sic] teach a separate storage compartment for the port door/carrier door assembly when opened.” Office Action, p. 3. Therefore, the system recited in claim 1 is not obvious over *Bonora* in view of *Bacchi*.

Moreover, the *Prior Art* does not provide the “port door/carrier door storage compartment” element missing in both *Bonora* and *Bacchi*. The load port assembly 28 illustrated in the *Prior Art* is similar to the load port disclosed in *Bonora*. The Examiner acknowledges that *Bonora* does not teach or suggest a “port door/carrier door storage compartment.” Accordingly, the Examiner must also agree that the *Prior Art* does not teach or suggest a “port door/carrier door

storage compartment.” Therefore, Applicants respectfully assert that claim 1 is not obvious over *Bonora* and *Bacchi*, in further view of the *Prior Art*.

**2. Dependent claims 2 and 17 Are Patently Distinguishable over *Bonora* in view of *Bacchi*, and further in view of the *Prior Art***

Dependent claims 2 and 17 depend directly or indirectly from independent claim 1. These dependent claims include all of the limitations of the independent claim from which they depend. Applicants respectfully assert that dependent claims 2 and 17 are allowable for at least the reasons set forth above concerning independent claim 1.

**3. Independent claim 8 Patently Distinguishes over *Bonora* in view of *Bacchi*, and further in view of the *Prior Art***

Claim 8, among other things, recites a frame having:

“a lower support member having a first mounting surface and second mounting surface, said lower support member forming a port door/carrier door storage compartment between said first and second mounting surfaces for isolating a pod door and carrier door from the interior area of the processing tool;”

For at least the same reasons as discussed above with regard to claim 1, Applicants respectfully assert that claim 8 is not is not obvious over *Bonora* and *Bacchi*, in further view of the *Prior Art*.

**4. Dependent claims 9-10 Are Patently Distinguishable over *Bonora* in view of *Bacchi*, and further in view of the *Prior Art***

Dependent claims 9-10 depend directly or indirectly from independent claim 8. These dependent claims include all of the limitations of the independent claim from which they depend. Applicants respectfully assert that dependent claims 9-10 are allowable for at least the reasons set forth above concerning independent claim 8.

**5. Independent claim 13 Patently Distinguishes over *Bonora* in view of *Bacchi*, and further in view of the *Prior Art***

Claim 13, in part, recites a frame having:

“a lower support member having a first mounting surface and second mounting surface, said lower support member forming a port door/FOUP door storage compartment between said first and second mounting surfaces for isolating a pod door and FOUP door from the interior area of the processing tool;”

For at least the same reasons as discussed above with regard to claim 1, Applicants respectfully assert that claim 13 is not obvious over *Bonora* and *Bacchi*, in further view of the *Prior Art*.

**6. Dependent claim 16 Is Patently Distinguishable over *Bonora* in view of *Bacchi*, and further in view of the *Prior Art***

Dependent claim 16 depends directly or indirectly from independent claim 13. This dependent claim includes all of the limitations of the independent claim from which it depends. Applicants respectfully assert that dependent claim 16 is allowable for at least the reasons set forth above concerning independent claim 13.

***Bonora and Bacchi and the Prior Art, in further view of Saeki***

On page 4 of the Office Action, the Examiner rejected claim 4 and 15 under 35 U.S.C. Section 103(a) as being unpatentable over *Bonora* and *Bacchi* and the *Admitted Prior Art*, and further in view of *Saeki*.

**1. Claim 4 Patently Distinguishes over *Bonora* and *Bacchi* and the *Prior Art*, in further view of *Saeki***

Dependent claim 4 depends directly from independent claim 1. Claim 1, in part, recites a frame having:

“a lower support member having a first mounting surface and second mounting surface, said lower support member forming a port door/carrier door storage compartment between said first and second mounting surfaces for isolating a pod door and carrier door from the interior area of the processing tool;”

As previously discussed above concerning claim 1, *Bonora*, *Bacchi* and the *Prior Art*, either alone or in combination, do not teach or suggest a “port door/carrier door storage compartment.” Moreover, *Saeki* does not provide the “port door/carrier door storage compartment” element missing from *Bonora*, *Bacchi* and the *Prior Art*. Figs. 2-3, and 6 of *Saeki* illustrate that the port door 41 is simply retracted into the wafer transfer chamber 38. The front panel 31 in *Saeki* does not isolate the pod door and/or port door from the wafer transfer chamber 38. Therefore, Applicants respectfully assert that claim 4 is not obvious over *Bonora*, *Bacchi* and the *Prior Art*, in further view of *Saeki*.

**2. Claim 15 Patently Distinguishes over *Bonora* and the *Prior Art*, in view of *Saeki***

Dependent claim 15 depends directly from independent claim 13. Claim 13, in part, recites a frame having:

“a lower support member having a first mounting surface and second mounting surface, said lower support member forming a port door/FOUP door storage compartment between said first and second mounting surfaces for isolating a pod door and FOUP door from the interior area of the processing tool;”

For at least the reasons previously discussed above concerning claim 4, Applicants respectfully assert that claim 15 is not obvious over *Bonora*, *Bacchi* and the *Prior Art*, in further view of *Saeki*.

### Additional Remarks

The references cited by the Examiner but not relied upon have been reviewed, but are not believed to render the claims unpatentable, either singly or in combination.

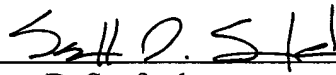
In light of the above, it is respectfully submitted that all of the claims now pending in the subject patent application are allowable, and a Notice of Allowance is requested.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 50-0639 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

Date: September 28, 2004

By: \_\_\_\_\_

  
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**Amendments to the Drawings**

Enclosed with this Response B are replacement drawing sheets that include changes to Figs. 1-3. These sheets, which include Figs. 1-3, replaces the original drawings sheets including Figs. 1-3.

Attachment: replacement drawing sheets 1-3.